

WHAT IS CLAIMED IS:

1. A device for injecting cooling air into a turbomachine turbine rotor, the device comprising a plurality of injectors distributed regularly around a longitudinal
5 axis of the turbomachine and mounted between an inner shroud and an outer shroud, each injector of aerodynamic profile comprising, between a leading edge and a trailing edge, a suction side wall and a pressure side wall, the cooling air passing through the injectors being ejected
10 towards through orifices in the turbine rotor via a flow section forming an aerodynamic throat between the trailing edge of one injector and the suction side wall of an immediately adjacent injector, wherein, in order to modify the section of the aerodynamic throat as a
15 function of the temperature of the cooling air passing through the injectors, each injector comprises a bimetallic structure with a first metal material forming a major portion of the structure of the injector and having a first coefficient of thermal expansion, and a
20 second metal material forming a complementary portion of the structure in the vicinity of the suction side wall meeting the trailing edge of the injector, and having a second coefficient of thermal expansion that is smaller than the first.
25
2. A device for injecting cooling air according to claim 1, wherein said first and second metal materials are assembled together by welding or brazing.
- 30 3. A cooling air injection device according to claim 1, wherein said first metal material is selected from nickel-based alloys.
4. A cooling air injection device according to claim 1,
35 wherein said second metal material is selected from nickel- or titanium-based alloys.

5. A cooling air injection device according to claim 1, wherein each injector is fixed to the inner and outer shrouds by a bolted connection so as to ensure a precise setting angle.

5

6. A cooling air injection device according to claim 1, wherein each injector presents reduced height over a determined length adjacent to its trailing edge so as to leave the aerodynamic throat free to expand.